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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,787	08/08/2007	Gustav Fagrenius	PS04 0064US1	4578

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EXAMINER

LAI, ANNE VIET NGA

ART UNIT	PAPER NUMBER
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2612

MAIL DATE	DELIVERY MODE
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08/02/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,787	Applicant(s) FAGRENIUS ET AL.	
	Examiner ANNE V. LAI	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-14 are currently pending in this case.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the indicators “7b” and “7a” seem switch positions according to the description in the specification page 5, lines 11-13.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sony Corp** (Kijima Kenji) [JP 2000-252667].

In claim 1, **Sony Corp** (Sony) discloses a cooling system for a mobile terminal for wireless communication, comprising:

a rotating fan (3, fig. 4) adapted to reduce the heat generated by the mobile terminal, and

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at least one weight (5) which is coupled to said rotating fan (3) so that said weight is activated by a centrifugal force when the rotational speed of the fan exceeds a predefined level in order to cause a vibration of the fan by creating an unbalance of the rotation of the fan.

See translation paragraphs 20-22; when the motor is rotating at a low speed, only the fan rotates; when the motor rotates at high speed, the eccentric weight joints to the rotation and provides vibration.

In claim 2, the fan of Sony consists of blades.

In claim 3, the fan of Sony consists of four blades (fig. 1).

In claim 10, the weight 5 is coupled to the fan by a clutch 4 (fig. 4).

In claim 11, the weight 5 and the fan have a common rotation axis (fig. 4).

In claim 12, the clutch 4 is a centrifugal clutch.

In claim 13, Sony discloses a mobile terminal for wireless communication (portable telephone) having a cooling system according to claim 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sony Corp** in view of **Hukki et al** [US 5,134,893] or **Pearce** [US 5,988,978].

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In claim 4, **Sony Corp** omits specifying each fan blade has an attached weight.

Hukki et al (Hukki) teaches a vibratory mechanism comprising a rotating fan-shaped with blades for use as weights (54, 46, figs. 1-2), the weights (54, 56) can be angled adjusted to produce no-eccentricity or certain levels of eccentricity (col. 2, l. 25-33; col. 3, l. 2-16). It would be obvious to obtain blades with predetermined weights an ordinary skill in the art may find it is easier to attach a predetermined weight to each blade therefore the weight may be adjusted at will, or the fan may be reused for other application.

Pearce teaches a method for balancing a fan having a plurality of blades rotatable about a centerline axis of the fan, the method comprising testing and placing a balance weight to each blade (abstract). It would have been obvious to an ordinary skill in the art; the fan of Sony would need to have blades balance for to be use as a cooling fan with smooth rotation.

In claim 5, Hukki teaches applying an additional eccentric weight 32 (assembly 14) to one side of the vibratory mechanism (the mechanism has only two fan blades, eccentric weight 32 applied to one side may means one blade does not has an applied weight) (col. 2, l. 63- col. 3, l. 16). It is seen the fan of Sony could have only two blades as in Hukki as design choice and the weight 5 is applied to one blade leaving the other blade having no attached weight.

In claim 14, Hukki teaches the fan having two blades each blade is considered equivalent to a weight; Sony teaches the fan could have four blades.

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7. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hukki et al** in view of **Sony** and further in view of **Takaya et al** [US 5,909,074].

In claims 6-7, Hukki teaches a vibratory mechanism could be created by rotating a fan having weighted blades (54, 56) and an applied eccentric weight (32). Sony teaches the fan could be used for cooling purpose and the eccentric weight is for creating vibration alert function in a wireless communication apparatus.

Both Hukki and Sony fail to disclose the eccentric weight is held to the center of the fan by a spring.

Takaya et al (Takaya) teaches a vibration motor comprising an eccentric weight 9 held to the center of rotation (the shaft 3) by a spring 8 (figs. 1, 2A, 2B) and the weight is movable along a guide pin from or to the center (col. 3, l. 28-47).

Based on the teaching of Tanaka, an ordinary skill in the art may want to try a weight attached by a spring movable to or from the center of rotation along the fan blade of Sony or Hukki to provide the same expected result but having advantage of smooth increase or decrease in vibration. The application of Takaya teaching to Sony may help eliminate the clutch, therefore reducing space and weight.

In claim 8, Takaya teaches the movement of the weight is guided by a bar (guide pin 6) (figs. 1, 2A, 2B; col. 3, l. 28-47).

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In claim 9, it is seen if the weight 9 of Tanaka is applied to the fan of Hukki or Sony, the weight 9 would encompass the blade.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

NEC SAIMATA [JP 2005-131462] teaches a vibrator also use as cooling fan.

Feder [US 3,911,416] teaches a silent call pager.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNE V. LAI whose telephone number is (571)272-2974. The examiner can normally be reached on 9:00 am to 6:30 pm, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wu Daniel can be reached on 571-272-2964, or Davetta Goins at 571-272-2957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AVL/

/George A Bugg/

Supervisory Patent Examiner, Art Unit 2612